Oct. 1, 1929. H. C. MEYER 1,729,890

BOY SCOUT SIGNALING DEVICE

Filed May 2, 1928

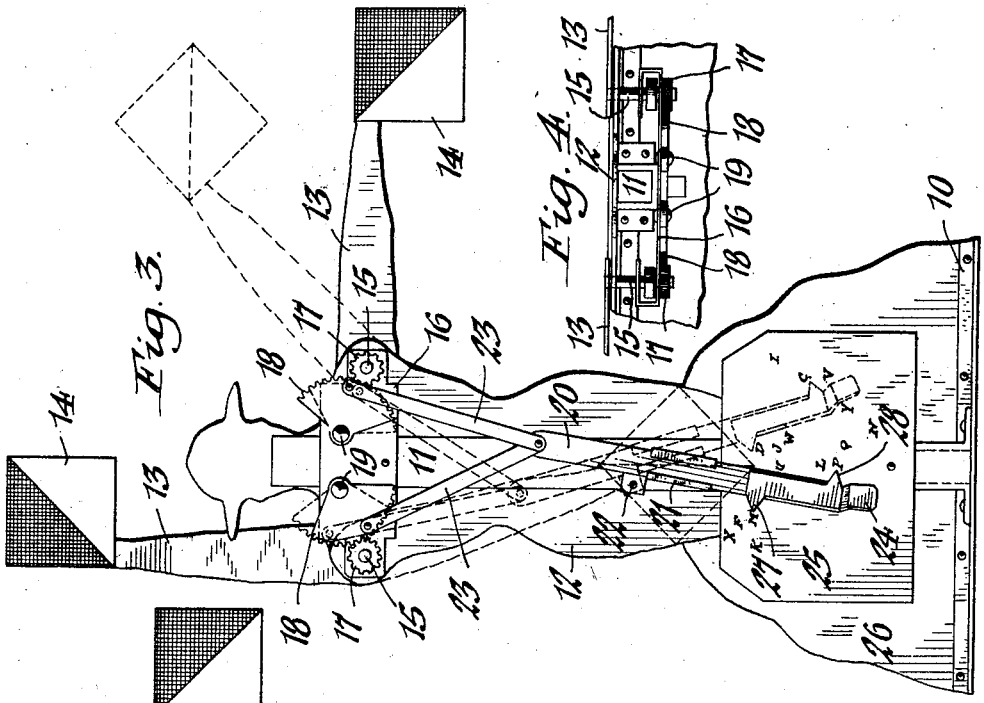

Fig. 3.

Fig. 4.

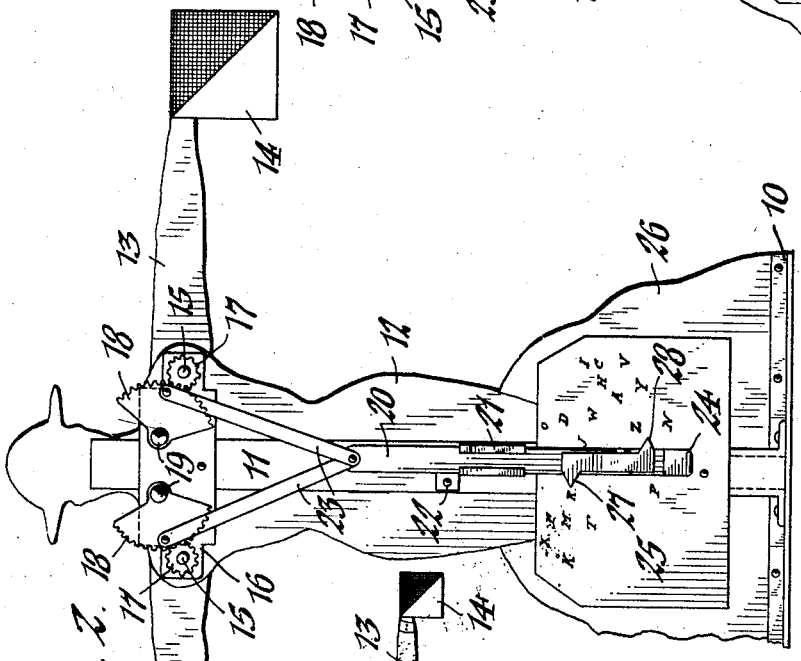

Fig. 2.

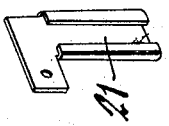

Fig. 5.

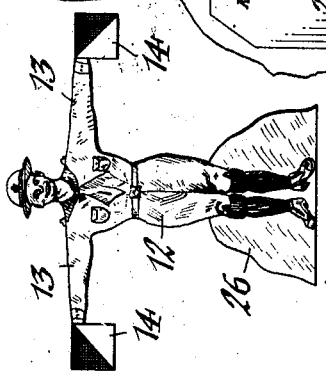

Fig. 1.

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UNITED STATES PATENT OFFICE

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BOY SCOUT SIGNALING DEVICE

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This invention relates to a signaling device for reproducing the positions of the Boy Scout semaphore code.

Its main object is to provide an inexpensive miniature reproduction of a human figure which can be operated in the home by recruits to aid them in learning the signal code.

A further object is to so construct the actuating mechanism of the figure that its arms by the movement of a single actuator may be swung independently and differentially, or simultaneously and uniformly to the various positions required by the code, thus simplifying the operation of the device.

In the accompanying drawings:—

Figure 1 is a front view of the device showing the arms swung to signal the letter R. Figure 2 is an enlarged rear view thereof with the arms in the same position. Figure 3 is a view similar to Figure 2 with the arms swung to indicate the letter P. Figure 4 is a top plan view of the device. Figure 5 is a perspective view of the pivoted guide.

Similar characters indicate corresponding parts throughout the several views.

10 indicates a suitable base from the front portion of which rises a post 11 to which a figure 12 representing a Boy Scout is fastened. These parts may be stamped of sheet metal or constructed of any other appropriate material.

The arms 13 carry the usual signal flags 14 and are pivoted to swing vertically. For this purpose, they are tightly secured to the front ends of rotary shafts 15 journaled in a cross piece 16 secured to the back of said post, these shafts extending through the adjacent portions of the figure to support the arms on the the front side thereof.

Secured to the rear ends of the shafts are pinions 17 which mesh with gear sectors 18 mounted on horizontal pivots 19 carried by the cross piece 16.

20 indicates an actuating bar or member mounted on the rear side of the post 11 and capable of a combined sliding pivotal movement. As shown in the drawing, this may be effected by mounting the bar to slide vertically in a guide 21 pivoted at its upper end to the post by a pin 22, to swivel or swing laterally. A pair of downwardly converging links 23 connect the respective gear sectors 18 with the upper end of the said actuating bar in such a manner that upon sliding the bar up or down in its guide the sectors are oscillated, thereby turning the shafts 15 and swinging the arms of the figure through a greater or less arc according to the stroke of the bar. The latter has a convenient handle 24.

By simply moving the actuating bar vertically in a straight line, the arms are simultaneously swung upward or downward, but by swinging the bar to one side or the other, it acts as a lever and through the action of the links 23 moves the arms independently of each other, permitting one arm to be moved through a greater or less arc relatively to the other by one and the same actuating bar or equivalent element. This capacity of the device to impart either a uniform or a differential stroke to the arms enables it to reproduce the various positions of the Boy Scout semaphore code. This is due to the fact that by a straight, vertical sliding movement of the actuating bar the angular movement of both links is uniform, while by a combined sliding and pivotal movement of that bar, one of the links in certain positions of the parts swings idly and does not disturb the position of the companion gear sector and arm, whereas the other link exerts a pulling or pushing force on the corresponding sector, causing the latter through the pinion 17 to swing the companion arm accordingly. For example, after both arms have been extended to a horizontal position by a straight vertical movement of the actuating bar, as shown in Figures 1 and 2, a short swing of the bar to the position shown by full lines in Figure 3, will swing the left hand sector and the corresponding arm upward, while leaving the other sector and arm at rest, thus signaling the letter P of the code. Again, assuming the arms to be extended horizontally, a combined sliding and swinging movement of the actuating bar to the position shown by dotted lines in Figure 3, will swing the left hand arm downward at an angle of about ninety degrees and the other upward at an angle of forty-five de-

grees, signaling the letter C. The arrangement illustrated in the drawings, in certain positions, permits one arm to swing through an arc of one hundred eighty degrees while the other remains at rest.

To predetermine the various positions of the actuating bar corresponding to the Boy Scout code, a suitable chart 25 is combined with the bar. That shown in the drawings is secured vertically to the back of the post 11 and preferably concealed by a shield or background 26 rising from the base of the figure. This chart bears letters or other characters properly located to indicate the positions of the actuating bar corresponding to the code, and the bar carries one or more pointers 27, 28 co-operating with the letters in such a manner that when a pointer, by the movement of the bar, is brought into register with a given letter, the arms of the figure will be moved to the corresponding signal position. Preferably, the letters are disposed in two groups one above the other, as shown, and the bar has two oppositely facing pointers for the upper and lower groups, respectively. This arrangement permits the letters to be widely spaced and made of legible size. To more readily associate each pointer with its companion group of letters, the upper pointer and corresponding letters may be colored red, for example, and the lower ones blue.

Satisfactory results are obtained when the parts are so assembled that in the extended horizontal position of both arms, the central teeth of the gear sectors 18 mesh with the pinions 17.

As all arm positions of the Boy Scout semaphore code can be reproduced by a single actuator, the operation of the device is easy and simple. Its construction is also simple and its cost of manufacture correspondingly small.

It is interesting and helpful in learning the code. For example, one member of a group of recruits may operate the figure from its rear side, while the others try to read the signals from its front side. While the mechanism herein shown and described is desirable for effecting the various movements of the arms I do not wish to be limited to that particular construction, as other means coming within the scope of the claims may obviously be employed.

I claim as my invention:—

1. In a signaling device of the character described, comprising a figure having sidewise, vertically-swinging arms fulcrumed thereon, means for actuating the arms relatively to each other to simulate the semaphore signaling code, and means for predetermining the positions of said arms in accordance with such code.

2. A signaling device of the character described, comprising a figure having sidewise, vertically-swinging arms fulcrumed thereon, means for actuating the arms either simultaneously with uniform motion or independently with differential motion to simulate the semaphore signaling code, and means for predetermining the positions of said arms in accordance with such code.

3. A signaling device of the character described, comprising a figure having sidewise, vertically-swinging arms fulcrumed thereon, means for actuating the arms either simultaneously and uniformly or independently and differentially to simulate the semaphore signaling code, and means for predetermining the positions of said arms in accordance with such code.

4. A signaling device of the character described, comprising a figure with movable arms, actuating means for swinging the arms to various positions, and a code chart associated with said actuating means for predetermining said positions.

5. A signaling device of the character described, comprising a figure with movable arms, and means for swinging the arms independently with a differential motion to various positions indicative of the semaphore signaling code, including a unitary actuator having a compound sliding and pivotal movement.

6. A signaling device of the character described, comprising a figure with movable arms, and means for swinging the arms independently with a differential motion to various positions indicative of the semaphore signaling code, including an actuator slidable vertically and pivoted to swing laterally in a plane substantially parallel with the figure, and pivoted connections between the respective arms and said actuator.

7. A signaling device of the character described, comprising a figure with movable arms, an actuating bar capable of a compound sliding and laterally-swinging movement relative to the figure, and means for swinging the arms, including oscillatory members respectively connected therewith and links connecting the respective oscillatory members with said actuating bar.

8. A signaling device of the character described, comprising a figure with movable arms, a guide pivoted to swing in a plane substantially parallel with the figure, an upright actuating bar slidable in said guide, means for swinging the arms including gear sectors, and links connecting said sectors with said bar.

9. A signaling device of the character described, comprising a figure with movable arms, means for swinging the arms to various positions, including an actuating member having a pointer, and a chart bearing signal-code indications co-operating with said pointer.

10. A signaling device of the character described, comprising a figure with movable

arms, a chart bearing a plurality of groups of signal-code indications, and means for swinging the arms to various positions, including an actuating member having a plurality of pointers, each co-operating with one of said groups.

11. A signaling device of the character described, comprising a figure with movable arms, a chart bearing a plurality of groups of signal-code indications, and means for swinging the arms including an actuating bar traversing said chart with a compound sliding and pivotal motion, said bar carrying oppositely directed pointers, each co-operating with one of said groups.

12. A device for simulating the semaphore signaling code, comprising a figure having arms pivoted thereon, motion-transmitting means for swinging said arms about their pivots, an actuating bar capable of a compound sliding and laterally-swinging movement relative to the figure, and links pivotally connecting the actuating bar with the motion-transmitting means, said links intersecting each other at the actuating bar and being joined thereto at a common fulcrum point.

HARRY C. MEYER.